

**RECEIVED
CENTRAL FAX CENTER****MAY 11 2009****Amendment to Claims**

1. (Currently amended) An ultrasonic diagnostic apparatus for delay-controlling ultrasonic wave beams of a plurality of ultrasonic transducer elements linearly arranged in a horizontal transversal direction to a specimen, characterized by:

means for deriving the distance "y" from each of said plurality of ultrasonic transducer elements to convergence positions by way of a hyperbolic function using the following formula:

$$(y + b)^2 = (ax)^2 + b^2$$

wherein "a" is the gradient of an asymptote of a hyperbola and $0 < |a| < 1$, "x" is a variable corresponding to each of the positions in said transversal horizontal direction of said plurality of ultrasonic transducer elements, and "b" is the curvature in the vicinity of the origin in the hyperbola; and

means for generating driving pulse of each of said plurality of ultrasonic transducer elements delayed respectively in accordance with said derived distances, thereby resulting in less drop in sound pressure in short distances to provide high sensitivity.

2. (Currently amended) An ultrasonic diagnostic apparatus for delay-controlling ultrasonic wave beams of a plurality of ultrasonic transducer elements arranged on a convex surface in a horizontal transversal direction to a specimen, characterized by:

means for deriving the distance from each of said plurality of ultrasonic transducer elements to convergence positions by way of the sum of a distance "y" obtained from a hyperbolic function using the following formula:

$$(y + b)^2 = (ax)^2 + b^2$$

wherein "a" is the gradient of an asymptote of a hyperbola and $0 < |a| < 1$, "x" is a variable corresponding to each of the positions in said transversal horizontal direction of said plurality of ultrasonic transducer elements, and "b" is the curvature in the vicinity of the origin in the hyperbola and the distance from each of said ultrasonic transducer

elements to a reference line to which the ultrasonic transducer element in the center comes into contact with the convex surface; and

means for generating the driving pulse of each of the said plurality of ultrasonic transducer elements delayed respectively in accordance with said derived distances, thereby resulting in less drop in sound pressure in short distances to provide high sensitivity.